

Design Technology Assessment: Designing Nutritious Meals

Learning objective: To evaluate understanding of healthy eating, food groups, and the design process involved in creating a balanced meal.

Read each question carefully. Use your knowledge of the Eatwell Guide and design principles to provide detailed answers. Remember to use technical vocabulary where appropriate.

Max the monkey is planning a healthy lunch for his friends. He wants to ensure that the meal provides enough energy for a long day of climbing and exploring, while also being environmentally friendly. He is considering using locally sourced vegetables and wants to make sure his menu includes a variety of food groups to ensure his friends stay healthy and strong.

Word bank: macronutrients · balanced · seasonal · sustainability · fibre · hygiene · provenance · complex carbohydrates · protein · micronutrients

1. Identify the five main food groups represented in a balanced diet according to the Eatwell Guide. Why is it important to have a variety of these in every meal? (2 marks)

2. Max wants to create a meal that provides sustained energy. Explain why choosing complex carbohydrates is a better choice for an active monkey than simple sugars. (2 marks)

3. Define 'food provenance' and explain how choosing local, seasonal produce can have a positive impact on the environment. (3 marks)

4. Compare and contrast the nutritional needs of an active explorer like Max with someone who has a more sedentary lifestyle. Justify why their meal plans might differ. (4 marks)

5. When preparing a meal, food hygiene is paramount. List three specific actions a chef must take to prevent cross-contamination in the kitchen. (3 marks)

6. What might happen to the human body if a diet is chronically low in essential micronutrients, such as vitamins and minerals? Give a reasoned explanation. (3 marks)

7. Extended Writing: Max has a budget of £5.00 to create a healthy, plant-based meal for two people. Design a menu that meets nutritional needs, justifies your choice of ingredients in relation to budget and health, and explains how you would ensure the meal is safe to prepare. (5 marks)

Draw: In the box below, create a labelled design sketch of your proposed healthy meal. Ensure you annotate the sketch to show which parts of the meal provide protein, carbohydrates, and vitamins.



Extension challenge: Total: /25. Greater Depth Task: Research a specific global food security issue. How could changing our dietary habits (e.g., eating less meat or choosing sustainable alternatives) help mitigate the impact of climate change on food production? Write a short persuasive paragraph justifying your views.